

Work Order ID 130907

130907

Page 1

March-26-15 1:28:22 PM

Item ID: D4023-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Cap And Flange
 Start Date: 3/26/15 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 3/26/15 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: ML5 Date: 15-03-27 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4023	B								

100 0.00

100

Purchasing

Purchasing

Memo

Issue P/O: 28004

Purchase part as per Dwg D4023

Part #:A4NS

Possible Supplier: Fuel Safe Systems

Material release note required

0.00

ML5 15-04-02 (1)

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Packaging

Memo

0.00

IX 2015-04-7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 130907

130907

Page 2

Item ID: D4023-3 **Accept** ***N900040100*** **Setup Start** ***NS1***
Revision ID: **Stop** ***NS2***
Item Name: Cap And Flange
Start Date: 3/26/15 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 3/26/15 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** ***NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120									DAS
QC	Memo	0.00				①			38
Quality Control									APR 08 2015
130	Identify as per dwg & Stock Location: <u>W1003</u>	0.00							
130									DAS
Packaging	Memo	0.00				1			27
Packaging									8-30
									APR 09 2015
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

Handwritten signature

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
--	--	---	--

Picklist Print

March-26-15 1:28:22 PM

Page 1

Work Order ID: 130907

130907

Parent Item: D4023-3

D4023-3

Parent Item Name: Cap And Flange

Start Date: 3/26/15

Required Date: 3/26/15

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A 11.05.31 new issue EC verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
A4NS		Purchased	No			100	Each	0.0000	1	1			

A4NS

Fuel Cap

**

KSPI5-047

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

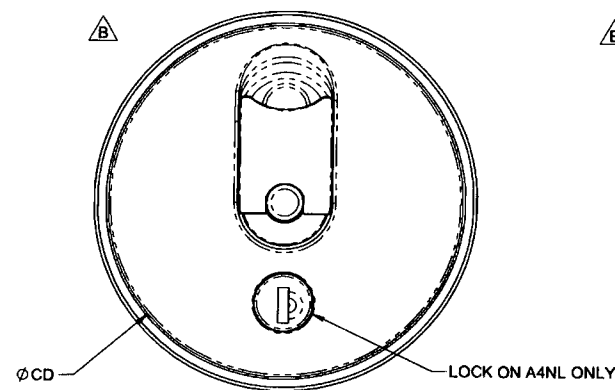
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

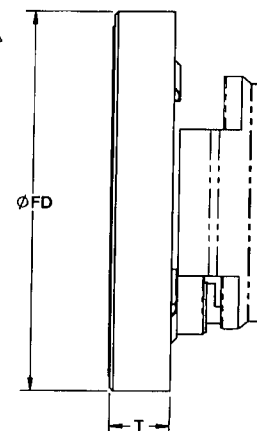
DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4023-1	NO REFERENCE
D4023-3	NO REFERENCE

SPECIFICATION CONTROL DRAWING

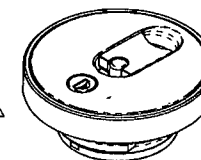
B



B



B



1309.07 MLJ
15-03-27

DART PART NUMBER	MANUFACTURER	MANUFACTURER PART NUMBER	POSSIBLE SUPPLIER	SUPPLIER PART NUMBER	FLANGE DIAMETER "FD"	FLANGE THICKNESS "T"	CAP DIAMETER "CD"
D4023-1	NEWTON EQUIPMENT	A512FF	AIRCRAFT SPRUCE AND SPECIALTY	05-02650	4.17	0.69	3.92
		A50SG	C.O.R.E AVIATION (PREFERRED)	A50SG			
D4023-3	NEWTON EQUIPMENT	A4NS (NON-LOCKING) (PREFERRED)	FUEL SAFE SYSTEMS	A4NS	3.25	0.51	3.01
		A4NL (LOCKING) (ALTERNATE)	FUEL SAFE SYSTEMS	A4NL			

B

D4023-X CAP AND FLANGE

RELEASED
2011-05-30
JW

NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: N/A
7) WEIGHT: 0.13 lbs

B	ADD -3	HS	11.05.11
A	NEW ISSUE	HS	10.02.05
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.05.11		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
DRAWING NO. DSC-D4023
REV. B
SHEET 1 OF 1
TITLE: FUEL CAP
SCALE: NTS

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28004**

Purchase Order Date 4/2/2015

PO Print Date 4/2/2015

Page Number 1 of 1

Order From :

VU-FUE001

Ship To : DART AEROSPACE LTD

FUEL SAFE SYSTEMS
1550 NORTH EAST KINGWOOD AVE

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REDMOND, OREGON 97756
US

Contact Name

Vendor Phone 8004336524

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB Destination-Collect

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	A4NS AS PER DWG.D4023 REV.B B130907	Fuel Cap	4/8/2015 Yes 4/8/2015		1.00 Each	\$204.90	\$204.90
						Line Total:	\$204.90
2	71401-45 Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A026 certification of material conformance A040 notification of quality escape A043 retention of quality documents	PROCUREMENT QUALITY CLAUSES	4/8/2015 No 4/8/2015		1.00	\$0.00	\$0.00
						Line Total:	\$0.00
						PO Total:	\$204.90

8015-047

✓
MCS CL

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

2

Change Date: 4/2/2015

Commercial Invoice - Exporter

Page: 1



dba Fuel Safe Systems

1550 NE Kingwood Avenue
Redmond, OR 97756 USA
PH (541) 923-6005 Fax (541) 923-6600
Tax ID# 20-1237625

Sold To:

Dart Aerospace, Ltd
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Ship To:

Dart Aerospace, Ltd
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada
Fax: (613) 632-1053

Invoice Number: 0085833-IN

Invoice Date: 4/2/2015

Order Number: 0067193

Order Date 4/2/2015

Salesperson: Rob Held

Customer Number: DARTAER

Customer P.O. PO28004		Ship VIA FEDEX INT P	Incoterms 2000: EXW		Terms Net 30 Days	
Tracking/BOL #: 5434 2062 1287;		# Packages: 1	IS Net Weight 0		HS Code: 8708.29.5060	Country of Origin: USA
Line#	Item Number	Unit	Ordered	Shipped	Price	Amount
Use Customer's FEDEX account #151793240						
1	A4NS Flush Cap, Aircraft Style Cap, 3", No Lock & Weld on neck (No bolts)	EACH	1	1	204.90	204.90

6015-04-7

Net Product Total 204.90

Shipping & Handling: 0.00

US Currency Net Invoice: 204.90

By ordering for shipment any material or product under this contract, buyer agrees to all the terms and conditions contained on the reverse, which are incorporated by reference herein.

These Commodities were exported from the United States in Accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

DEPARTMENT OF HOMELAND SECURITY
U.S. Customs and Border Protection

OMB No. 1651-0098
Exp. 03-31-2012

**NORTH AMERICAN FREE TRADE AGREEMENT
CERTIFICATE OF ORIGIN**

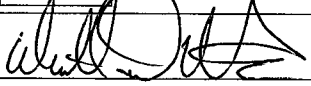
19 CFR 181.11, 181.22

1. EXPORTER NAME AND ADDRESS AIRCRAFT RUBBER MANUFACTURING, INC. FUEL SAFE SYSTEMS 1550 NE KINGWOOD AVE REDMOND, OR 97756 TAX IDENTIFICATION NUMBER: 20-1237625	2. BLANKET PERIOD FROM TO
3. PRODUCER NAME AND ADDRESS AIRCRAFT RUBBER MANUFACTURING, INC. FUEL SAFE SYSTEMS 1550 NE KINGWOOD AVE REDMOND, OR 97756 TAX IDENTIFICATION NUMBER: 20-1237625	4. IMPORTER NAME AND ADDRESS DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CANADA TAX IDENTIFICATION NUMBER:

5. DESCRIPTION OF GOOD(S)	6. HS TARIFF CLASSIFICATION NUMBER	7. PREFERENCE CRITERION	8. PRODUCER	9. NET COST	10. COUNTRY OF ORIGIN
Order # 0067193 AUTOMOTIVE PARTS AND ACCESSORIES	8708.29.50	C	NO	NC	ENGLAND

I CERTIFY THAT:

- THE INFORMATION ON THIS DOCUMENT IS TRUE AND ACCURATE AND I ASSUME THE RESPONSIBILITY FOR PROVING SUCH REPRESENTATIONS. I UNDERSTAND THAT I AM LIABLE FOR ANY FALSE STATEMENTS OR MATERIAL OMISSIONS MADE ON OR IN CONNECTION WITH THIS DOCUMENT;
- I AGREE TO MAINTAIN AND PRESENT UPON REQUEST, DOCUMENTATION NECESSARY TO SUPPORT THIS CERTIFICATE, AND TO INFORM, IN WRITING, ALL PERSONS TO WHOM THE CERTIFICATE WAS GIVEN OF ANY CHANGES THAT COULD AFFECT THE ACCURACY OR VALIDITY OF THIS CERTIFICATE;
- THE GOODS ORIGINATED IN THE TERRITORY OF ONE OR MORE OF THE PARTIES, AND COMPLY WITH THE ORIGIN REQUIREMENTS SPECIFIED FOR THOSE GOODS IN THE NORTH AMERICAN FREE TRADE AGREEMENT AND UNLESS SPECIFICALLY EXEMPTED IN ARTICLE 411 OR ANNEX 401, THERE HAS BEEN NO FURTHER PRODUCTION OR ANY OTHER OPERATION OUTSIDE THE TERRITORIES OF THE PARTIES; AND
- THIS CERTIFICATE CONSISTS OF PAGES, INCLUDING ALL ATTACHMENTS.

11.	11a. AUTHORIZED SIGNATURE 	11b. COMPANY AIRCRAFT RUBBER MANUFACTURING, INC. dba FUEL SAFE SYSTEMS		
	11c. NAME Bill Hare	11d. TITLE President		
	11e. DATE April 2, 2015	11f. TELEPHONE NUMBERS 	(Voice) 800-433-6524	(Facsimile) 541-923-6015



CERTIFICATE OF COMPLIANCE

Date of Certificate: 04-02-2015

Certifying Agency: Aircraft Rubber Manufacturing Inc.
1550 NE Kingwood Ave
Redmond, OR 97756

Customer: Dart Aerospace, Ltd.
1370 Aberdeen Str.
Hawkesbury, ON K6A 1K7
Canada

P.O. #: PO 28004

ARM Order #: 0067193

Drawing #: D4023 Rev B

Product: Fuel Cap

Part #: A4NS

Quantity: (1)

Date of Manufacture: 04-02-2015

Certification:

Aircraft Rubber Manufacturing Inc. certifies that the above referenced item, supplied under the above referenced purchase order, is in conformance with all known requirements.

Authorized Signature

A handwritten signature in black ink, appearing to read "William D. Hare", is written over a solid black horizontal line.

William D. Hare

Aircraft Rubber Manufacturing Inc.
dba Fuel Safe Systems
1550 NE Kingwood Avenue
Redmond, OR 97756
Phone: (541) 923-6005 * Fax: (541) 923-6015



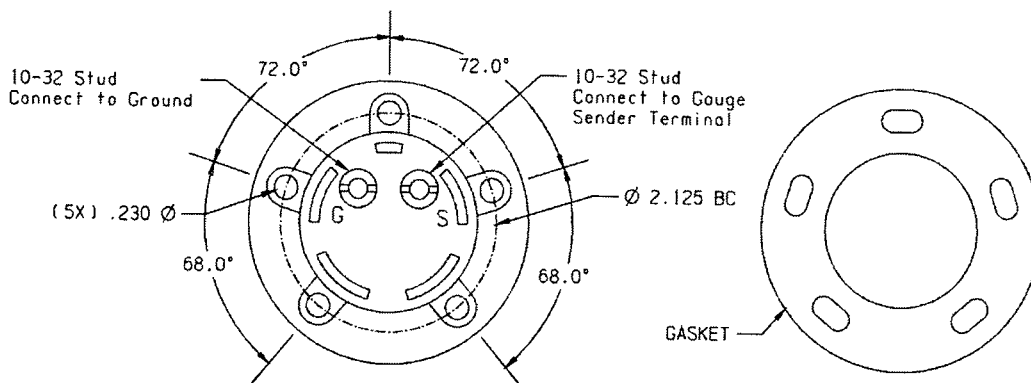
Fuel Safe Sending Unit Installation Instructions For SU Series

Usage is restricted to vehicles using gasoline or diesel fuels only and to vehicles with 12VDC nominal negative ground electrical systems (6 & 24 VDC units must be special ordered). Use of this sender with any other fluid is not recommended, please consult Fuel Safe. No adjustments can be made to the length or resistance of this sender unit, make sure you have the correct unit for your vehicle application (consult the factory if necessary).

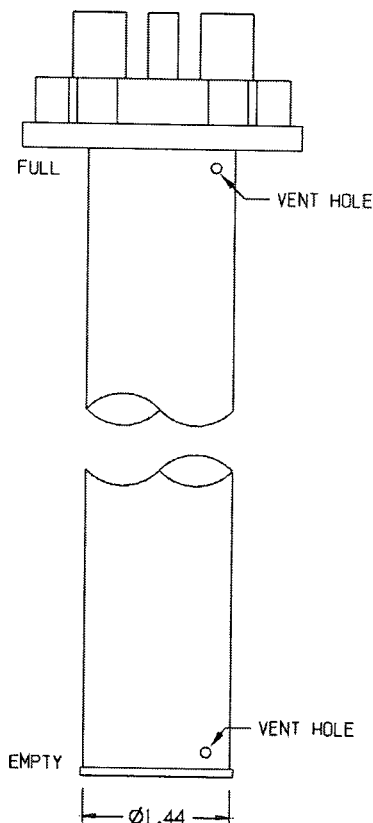
CAUTION

Disconnect negative battery cable lead before making any electrical connections. Use extreme caution by working in a well-ventilated area and keeping all hot materials away from work area.

Make the electrical connections before installing the sending unit on the tank; connect a ground wire to the G terminal and the wire from the gauges sender terminal to the S terminal on the sending unit. Once the electrical connections are made, turn unit upside down (to simulate Full) and then right side up (to simulate Empty) while monitoring the fuel gage. This will ensure that you have properly matched the units resistance with the vehicles fuel gauge in the dash. The unit can now be bolted to the tank (with the enclosed screws). These units utilize an SAE 5-hole bolt pattern, see the drawing below. Align the bolt holes in the sender with the bolt holes in the tank, (only one orientation will align). The gasket has elongated holes so its alignment is not critical. Torque the screws to 20-25 inch lb. for a good flange to tank seal (no sealant is required or recommended for the gasket).



DO NOT LOOSEN SLOTTED NUTS. IT WILL VOID THE WARRANTY.



Fuel Safe Systems

www.fuelsafe.com

Phone: (541) 923-6005 * Order Desk: (800) 433-6524 * Fax: (541) 923-6600

Form 7.2.3.10 Rev. 1

Approved By: SRL

2/29/12

CONTROLLED



FUEL SAFE FUEL CELL DO'S & DON'TS

Do's

- 1) **Do:** use only the proper fuel that is specified for use in your bladder.
- 2) **Do:** call for advice on blended fuels.
- 3) **Do:** spray water on the foam before removing it from the fuel cell to prevent static ignition of vapors.
- 4) **Do:** read and understand the limited warranty.
- 5) **Do:** install an inline fuel filter between the fuel cell and the fuel pump. If the cell has an in-tank fuel pump insure that it has a screen filter. We recommend that the fuel filter be cleaned after the first two tanks of fuel.
- 6) **Do:** ground the fuel cell fill plate to vehicle chassis.
- 7) **Do:** allow generous ventilation around the cell and vehicle.
- 8) **Do:** drain a gasoline fuel bladder when preparing for storage. Store in a dry area away from bright light and moisture.
- 9) **Do:** drain an alcohol bladder and wipe with a rubber protectant (Armor-All, etc.) when preparing for storage. Store in a dry area. Do not use any petroleum based products on or near an alcohol bladder.
- 10) **Do:** contact Fuel Safe with any quality issues, questions, or comments.

DON'TS

- 1) **Do NOT:** use unapproved additives which may cause irreparable damage to your bladder or fuel system.
- 2) **Do NOT:** attempt bladder repair without consulting Fuel Safe.
- 3) **Do NOT:** put Gasoline or any Petroleum based products in, on, or near an Alcohol Bladder.
- 4) **Do NOT:** pressurize the fuel bladder.
- 5) **Do NOT:** weld or drill the metal container with the bladder installed.
- 6) **Do NOT:** mount a fuel cell only by the containers external flange. You must support the bottom and sides.
- 7) **Do NOT:** tighten the plate mounting bolts greater than 95 inch- pounds.

Aircraft Rubber Manufacturing, Inc. / dba Fuel Safe Systems/ARM-USA
1550 NE Kingwood Avenue, Redmond Oregon 97756
Tel: (541) 923-6005 Order Desk: (800) 433-6524 Fax: (541) 923-6600
Email: sales@fuelsafe.com
Internet: www.fuelsafe.com



PRODUCT INFORMATION

PLEASE READ THOROUGHLY

IMPORTANT PRECAUTIONS IN USING FUEL SAFE RACING EQUIPMENT

1. **ENVIRONMENTAL EFFECTS** – Most racing equipment is affected by weathering; that is: sunlight, wind, freeze-thaw cycles, high and low temperatures, rain and airborne contaminants. Ozone, ultra- violet light, water and acids are especially detrimental to many plastic and rubber parts. Protect your fuel cell and refueling equipment from unnecessary environmental exposure.
2. **TEMPERATURE** – Racing fuel cell bladders rely on deformability to ward off impact and puncture. Decreasing temperatures may limit pliability and could thereby reduce the cell's effectiveness. Most FUEL SAFE racing type fuel cells are designed for normal competition environments of 30°F to 120°F (0°C to 50°C). Use below -20°F (-30°C) may diminish performance. Maximum intermittent bladder exposure temperature is 160°F (70°C).
3. **WATER & MOISTURE** – Water vapor and direct sunlight exposure may affect fuel cell bladders and foam baffling. Always install your fuel bladder within a metal or composite enclosure, and keep the system externally and internally free of water and water vapor.
4. **ABRASION** – Many racing products, and especially rubberized fuel cell bladders, are susceptible to chafing or abrasion. Handle these items with care and install them gently without scraping. Keep free of pebbles, sand and other abrasives which can wear rubber and plastic materials. Be certain that the tank, container or cavity which holds a fuel cell bladder is thoroughly smooth and continuous on its interior. Do not put sharp or heavy objects inside a fuel cell bladder as they could chafe or cut the bladder and create an eventual leak.
5. **FUEL COMPATIBILITY** – Most fuel system components are NOT resistant to ALL types of fuels. Therefore, it is essential to identify the intended fuel (i.e. gasoline, diesel, methanol, etc.) before purchasing equipment and putting it into service. For example, most fuel cell foam baffling material is adversely affected by alcohol as are certain fuel cell bladder materials. Other chemical fuels such as nitro methane, nitro propane, and additives such as aniline, toluene and certain aromatics can deteriorate hoses, gaskets, valves, bladders and other fuel system parts. Double check compatibility and, when in doubt, contact the FUEL SAFE factory for advice. Don't take chances.
6. **STORAGE** - When storing a fuel cell, drain the bladder completely, wash and dry the interior, close off all ports, and keep it in a dark, warm and dry area.
7. **LIFE SPAN** – Major sanctioning bodies such as FIA, NASCAR, ASA, SCCA, etc. have recognized that fuel cells and related equipment are slowly affected by ozone, ultraviolet, aging and the chemical action of gasoline and racing fuels. Hence, a Five-Year Legal Life Span has been set on all fuel cell bladders. The fuel cell bladder portion of your fuel cell system must be replaced within 5 years of its manufacture date. No repairs may be made to bladders after that 5-year period has elapsed. Upon factory re-inspection, a 2-year extension may be granted under FIA & SCCA regulations.



8. **DIFFUSION** – Due to the nature of fuel cell bladder materials, molded tanks and hoses, a certain amount of fuel permeation or “diffusion” will occur through the walls. Always provide generous ventilation around the cell and vehicle so as to preclude the accumulation of hazardous fuel vapors.
9. **INSTALLATION** –When installing any fuel cell, dry break valve, vent valve, fuel hoses or other FUEL SAFE components be certain to follow the instructions strictly and carefully. Pay particular attention to location, bracketing, venting, grounding and isolation from the driver compartment. Since every vehicle is different, it is not realistic to prescribe a set method of installation for every FUEL SAFE product. However, certain basic safety and function practices must be adhered to for all installations. Be certain your installation procedure complies with FUEL SAFE’s general instructions as well as the specific requirements of your competition organization or sanctioning body. When in doubt, consult a professional chassis builder, vehicle engineer or the FUEL SAFE factory for installation assistance.
10. **SAFETY FOAM BAFFLING** – Fuel cell foam is a reticulated or open-cell sponge-like material. When used within a fuel cell bladder, foam helps suppress explosion, control fuel slosh and absorb some impact energy. Foam should never be handled when wet with fuel as fire could erupt. Flush the cell with water before removing foam. Also, Fuel Safe foams should be used with gasoline only and not with additives, alcohol or an excess of amount of aromatics. See para 19 for further foam precautions.
11. **PRESSURE TESTING** – FUEL SAFE tanks and bladders are not to be inflated or pressurized. However, leak testing of bladders with less than 50 gallons capacity may be performed at 1/4 psi (6” water) maximum pressure. An accurate gauge and a redundant pressure regulator system are essential. Over pressurizing may damage the tank or bladder and its’ seams without visual evidence. Special care should be taken with complicated shaped fuel cells or fuel cells with internal baffles or collectors.
12. **CONTAINERS (CANS)** – All fuel cell bladders are to be installed inside a minimum 20 gauge steel or .062” aluminum enclosure (container). These are minimums and thicker walls are sometimes mandatory and always recommended. The container serves to support the bladder, deflect impacts and provide a flame shield. FUEL SAFE offers ready-made containers. When sizing a bladder or container, be sure to leave a clearance for easy installation and removal. Containers for soft rubber bladders (rubberized fabric) should be 1% larger in length, width and height. Containers for molded hard rubber bladders must be 2% larger in each dimension to accommodate linear swell.
13. **STATIC GROUNDING** – Electrical charges may build up on components due to fuel agitation, high flow rates or by induction from other sources. To alleviate sparking and possible fuel ignition, always electrically ground fuel handling equipment. Fuel cells, fill necks, dry-break valves, etc. should be installed with a bonding strap to the chassis for unimpeded electrical dissipation. Overhead fueling rigs, dump cans, hose connections, funnels, valves, filter presses, gasoline cans, etc. must be electrically “bonded” together with static straps and then connected to an earth ground before any fuel or vapors are transferred. Always wear full protective clothing when working with flammable fuels. Use approved grounding cable for bonding and grounding straps. All terminals must make a clean full-circle connection to assure electrical conductivity.



14. **VENTING** – Proper fuel cell venting is essential to fuel system operation and fire safety. If your fuel cell is to be “quick-filled”, you will need a 1” or 1-1/2” diameter vent, ball check valve, vent hose and Discriminator Valve. Regular-fill fuel cells require a 3/8” vent, vent check valve and vent hose. Be certain the vent hose is firmly attached to the fuel cell and is routed upward and away from the cell, engine, exhaust and the driver compartment. Always use top quality fuel resistant hose, make air-tight joints and exit the vent rearward to a catch tank or into the free air stream and away from any potential ignition source.
15. **DATA BLOCK** – All FUEL SAFE fuel cells are individually manufactured, inspected and serial numbered. Information regarding your FUEL SAFE fuel cell is located on the fuel bladder in the “data block”. This information includes the manufacture date, material of construction and serial number. Please write down this information before contacting FUEL SAFE with any questions.
16. **FOAM REMOVAL – CAUTION:** All fuel tanks, fuel cells, and gasoline containers must be purged and inerted before inspection, disassembly or storage. Fuel cells are best treated by draining all fuel and then filling with water for 5 minutes and emptying. The internal foam baffling should be removed immediately thereafter and dried outdoors. After wiping the bladder dry, the foam may be cleaned and reinstalled or replaced with new. NEVER REMOVE OR INSTALL FOAM THAT IS WET WITH FUEL AS IT MAY SPRAY DROPLETS OR IGNITE FROM A STATIC CHARGE. ALWAYS WEAR FULL PROTECTIVE CLOTHING WHEN WORKING ON ANY FUEL CELL, FUEL CONTAINER OR ACCESSORY.
17. **REPAIRS** – Any repairs to Fuel Safe fuel bladders shall meet the minimum requirements defined for a new fuel bladder and shall be carried out by Fuel Safe. No other repairs are acceptable.
18. **MODIFICATION & ASSEMBLY** – Alterations, modifications and repairs to FUEL SAFE cells and equipment MUST only be performed by the manufacturer at its facilities. Disassembly for periodic inspection and cleaning purposes is highly recommended and should be performed only by a trained mechanical technician or fuel system engineer. Reassembly must conform to FUEL SAFE design and a low pressure (1/4 psi) leak test must be applied to all joints, fittings and surfaces. Certain FUEL SAFE products, notably Enduro Cells, Core Cells and Race Safe cells are not repairable if punctured. Replace the bladder immediately. For other items requiring repair or service contact Fuel Safe.
19. **ALTERNATIVE APPLICATIONS** – FUEL SAFE racing fuel cells and related fuel system equipment may be suitable for use in commercial and military vehicles, road cars, off-road equipment and boats. However, be certain the entire installation complies with required agencies regulations such as NHTSA, D.O.T., E.P.A., NMMA, Coast Guard or I.C.C. Pay particular attention to safe location, secure mounting, appropriate venting, non-spill filling, static grounding, ventilation, firewalls and ground clearance. Contact the relevant Agency for assistance with compliance.
20. **SPILLAGE** – Accidents can occur in the pits or even at home in the garage due to sloppy or leaky filling procedures. Fill your fuel cell slowly allowing time for vapors to discharge avoiding “back-surge” or dripping. If your cell is designed for quick-filling, then be certain you have the appropriate dry break valve, roll-over valve, and proper vent. Use a Discriminator Valve, catch tank or over-flow container to prevent or collect any liquid fuel discharge from the vent line. Also, check frequently that all fuel lines, pumps, level gauges, dipsticks and fuel return lines are drip free and air-tight. Your fuel



cell is only as good as its peripheral equipment and accessories. Be sure your entire fuel system is completely spill free and leak tight.

21. **PERSONNEL PROTECTION** – Pit crews, mechanics and all others involved with handling flammables must wear FULL protective clothing and equipment of an impervious, non-static and flame resistant type. Multi-layer suits made of duPont Kevlar or Nomex are considered appropriate when used with a fire protective hood, underwear, socks, shoes and face shield.
22. **LIMITS OF WARRANTY** – FUEL SAFE WARRANTS ONLY THAT ITS PRODUCTS ARE CONSTRUCTED TO GENERAL INDUSTRY STANDARDS AND HAVE PASSED FUEL SAFE'S OWN IN-PLANT INSPECTION. BECAUSE OF THE GRAVE AND UNAVOIDABLE DANGERS INVOLVED IN RACING AND ESPECIALLY IN THE USE OF FUEL HOLDING AND FUEL HANDLING DEVICES, FUEL SAFE MAKES NO WARRANTY, EXPRESS OR IMPLIED OF ANY PRODUCTS' SUITABILITY FOR USE. NOTWITHSTANDING ITS LONG HISTORY OF SUCCESSFUL PRODUCT USAGE, FUEL SAFE AGAIN, MAKES NO WARRANTY WHATSOEVER REGARDING ITS PRODUCTS' SAFETY OR APPLICABILITY FOR ALL OR ANY PURPOSES. FURTHER, FUEL SAFE DISCLAIMS ANY LIABILITY IN TORT FOR DAMAGES, DIRECT OR CONSEQUENTIAL INCLUDING PERSONAL INJURIES RESULTING FROM A MALFUNCTION OR FROM A DEFECT IN DESIGN, MATERIAL, WORKMANSHIP OR MANUFACTURE WHETHER CAUSED BY NEGLIGENCE ON THE PART OF FUEL SAFE OR OTHERWISE. BY USING FUEL SAFE EQUIPMENT OR COMPONENTS, OR ALLOWING IT TO BE USED BY OTHERS, THE BUYER AND USER WAIVE ANY LIABILITY OF FUEL SAFE FOR PERSONAL INJURIES OR OTHER DAMAGES ARISING FROM SUCH USE. THE ABOVE SHALL APPLY TO ALL PRODUCTS FUEL SAFE FURNISHES WHETHER OR NOT DESIGNED, MANUFACTURED, IMPORTED, WAREHOUSED, DISTRIBUTED OR SOLD BY FUEL SAFE.
23. **FACTORY SAFETY SUPPORT** – Gasoline and racing fuels are highly flammable and subject to sudden ignition and/or explosion. Before every use and competition event, be certain to carefully inspect all FUEL SAFE equipment for proper installation, function and freedom from leaks. Should any questions arise, FUEL SAFE is available to assist with technical advice, replacement parts or product service.

Aircraft Rubber Manufacturing Inc.

Db a Fuel Safe Systems

1550 NE Kingwood Ave.

Redmond OR 97756

Telephone: 541 923 6005 FAX: 541 923 6015

E-Mail: sales@fuelsafe.com

WEB: www.fuelsafe.com

NOTICE PLEASE READ

DO NOT INSTALL OR USE your FUEL SAFE CELL before reading the warnings on this notice. If you have any questions relative to the use of this product please contact Fuel Safe prior to the installation of this cell.

**AIRCRAFT RUBBER MANUFACTURING INC.
FUEL SAFE SYSTEMS
1550 NE KINGWOOD AVENUE
REDMOND, OR 97756
(541) 923-6005 – (800) 433-6524**

ASSUMPTION OF RISK. It is well recognized that automobile racing is a very dangerous activity. Even with the utmost of care, racing involves certain unavoidable risk. Persons using Fuel Cells and accessories manufactured by Fuel Safe **ASSUME THE RISK** inherent in this type of activity.

LIMITED WARRANTY/ DISCLAIMER. Fuel Safe will repair or replace, at its expense and at its option, any Fuel Safe Cell or accessory which in the normal use has proven to be defective in workmanship or material, provided that the purchaser notifies Fuel Safe of the alleged defect within ninety (90) days of purchase. This warranty does not cover normal wear and tear. Fuel Safe will not be responsible for any asserted defect which has resulted from misuse, abuse, repair, or alteration made by anyone other than a representative of Fuel Safe. Under no circumstances will Fuel Safe be liable for incidental or consequential damages resulting from defective products. This warranty is the sole warranty of Fuel Safe and sets forth the purchaser's or user's exclusive remedy, with respect to defective products. All other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Fuel Safe.

WARNINGS

1. ANY modifications of Fuel Safe products may result in failure of the system.
2. ALL Fuel Safe cells and accessories should be inspected prior to each race and tested after any accident.
3. Lack of PROPER MAINTENANCE may result in failure of the system.
4. All Fuel Safe cells and accessories should be INSPECTED YEARLY for any cracked, worn, torn or damaged materials such as gaskets; O-rings must be replaced immediately.
5. Certain fuel mixtures may have an adverse affect on certain materials and or seals used in Fuel Safe cells and accessories. Users must CAREFULLY WATCH for swollen fuel cell materials, gaskets, or seals, and then replace as necessary.
6. Do not use sealant on the gasket surfaces.

ANY FAILURE IN A FUEL SAFE PRODUCT SHOULD BE REPORTED TO FUEL SAFE IMMEDIATELY. THE PRODUCT MUST NOT BE USED AND SHOULD BE RETURNED FOR INSPECTION IMMEDIATELY.

Aircraft Rubber Manufacturing, Inc., dba Fuel Safe Systems
1550 NE Kingwood Avenue, Redmond, OR 97756
Tel: (541) 923-6005 Order Desk: (800) 433-6524 Fax: (541) 923-6600
Internet: www.fuelsafe.com Email: sales@fuelsafe.com



Limited Warranty

Fuel Safe (Fuel Safe Systems) warrants, to the original purchaser of this New Fuel Safe Fuel Cell or bladder, against defects in material and workmanship for the period specified below. FUEL SAFE's warranty commences from the DATE OF MANUFACTURE, stenciled on the bladder, rather than the date of sale.

<i>Catalog and Custom Racing Fuel Cells: Pro Cell, Sportsman, Flex Fuel, Enduro, Race Safe, Core, Ultra and Ultra II.</i>	<i>Five Years</i> from date of manufacture.
<i>Industrial Products e.g. Ranger Series Pillow Tanks, Pro Barrels, and Fuel Crates.</i>	<i>Two Years</i> from date of manufacture.
<i>Prototypes, Experimental Projects, R&D Programs, and Electronic Equipment.</i>	<i>No Warranty.</i>

Fuel Safe assumes no responsibility or liability for damages or injuries which may result from the use or installation of its products, whether or not properly installed or used. Due to the nature of the products sold by Fuel Safe and the extreme demands on racing and performance products Fuel Safe products are sold WITHOUT ANY EXPRESS WARRANTY OR IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR INTENDED PURPOSE.

This warranty shall not apply to a fuel cell or any component or accessory which has been subjected to accident, negligence, disassembly, alteration (including, but not limited to, improper or faulty repair) abuse, misuse (including, but not limited to, incompatible fuels or additives), improper installation (including, but not limited to, use of unauthorized parts or accessories), or unsuited uses. **FUEL SAFE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, CONTINGENT DAMAGES, EXPENSE OR INJURY ARISING FROM ANY DEFECT IN ITS FUEL CELLS OR FROM THE USE OF ANY FUEL CELL, DEFECTIVE OR OTHERWISE.** Any warranties implied by law are limited to the duration of this warranty.

All warranty claims hereunder shall be made by contacting Fuel Safe and first obtaining an RMA # then returning the FUEL SAFE product, freight prepaid, together with the original invoice and a full written description of the alleged defect to Fuel Safe, 1550 NE Kingwood Ave Redmond, OR 97756. Mark shipment with the RMA number. FUEL SAFE will, at its sole option, repair, replace or pro-rata credit that amount against a replacement cell, for the original purchaser, when FUEL SAFE's examination discloses it is defective in materials or workmanship and provided it has been returned to FUEL SAFE within the time period specified above. Cells older than 60 days will be prorated at a straight ratio based on the number of months left on the warranty, cells returned within 60 days will not be prorated.

FUEL SAFE reserves the right to make changes in its products at any time. Product refinements or alterations will be made without obligation to change or improve products that were previously manufactured. This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

Warranted cells will be returned to the customer pre paid via ground freight within the US.

THIS WARRANTY AND THE RIGHT TO REPAIR OR THE REPLACEMENT OF DEFECTIVE PRODUCT OR CREDIT OF THE PRO-RATED PURCHASE PRICE ARE THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

Aircraft Rubber Manufacturing Inc.
dba Fuel Safe Systems/ARM-USA
1550 NE Kingwood Avenue, Redmond, OR 97756
Phone: (541) 923-6005 * Order Desk: (800) 433-6524 * Fax: (541) 923-6600
www.fuelsafe.com